

C1385.01M

Claims

1. A spectral discrimination apparatus for use in a scanning optical microscope, the spectral discrimination apparatus comprising light dispersive means and frequency selective means including a rotatable disc-like member or members positioned in an aperture plane after the dispersive means, the member or members being shaped in a form which, on rotation of the member or members, selectively blocks or transmits light in order to control the frequency of light transmitted by the apparatus.
2. A spectral discrimination apparatus according to claim 1, wherein the apparatus includes a detector for receiving light from the frequency selective means.
3. A spectral discrimination apparatus according to claim 1 or 2, wherein the or each rotatable member has opaque and transmissive regions, with one or more light-transmitting apertures in an otherwise opaque rotatable member.
4. A spectral discrimination apparatus according to claim 1 or 2, wherein the or each rotatable member has a shaped outer periphery to control the passage of light past the rotatable member.
5. A spectral discrimination apparatus according to any of claims 1 to 4, wherein a pair of rotatable members is employed, rotated about the same axis, or about spaced parallel axes, the members cooperating together to provide the required light blocking and transmission.
6. A spectral discrimination apparatus according to any of the preceding claims, wherein the, or each, rotatable member can be continuously rotated or rotated in a step-wise fashion between indexed positions.
7. A spectral discrimination apparatus according to any of the preceding claims, wherein rotation of the, or each, rotatable member causes a particular waveband or wavebands

of light to be transmitted and this waveband can vary with angular rotation or can be invariable.

8. A scanning optical microscope having a spectral discrimination apparatus according to any of claims 1 to 7, wherein an emission path of the microscope includes a telescope through which the light passes before the light reaches the dispersive means.
9. A method of spectral discrimination in a scanning optical microscope, comprising dispersing the light and then passing the light through frequency selective means in which the form of a rotating disc-like member or members controls the frequency of transmitted light by selectively blocking or transmitting light, the member or members being positioned in an aperture plane after the dispersive means.
10. A method of spectral discrimination in a scanning optical microscope according to claim 9 and further comprising rotating the member or members about the same axis, or about spaced parallel axes.